

Capital Flows in Emerging Economies: Determinants and Implications for Financial Regulation in Low-Income Countries

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International Capital Flows: Uncertain Gains, Sure Pain

A few definitions and concepts

- Following debt crises in the 1980s, emerging economies opened to international capital flows = open capital account and deregulate financial sector
- Financial liberalization: removal of regulations like:
 - Ban/ceiling for non-residents holding bonds in local currency
 - control of international banking operations
 - Convertibility of the local currency
- International capital flows have several forms: FDI, equity investment in local stock exchanges, short and long term loans.

International Capital Flows: Uncertain Gains, Sure Pain

Elusive gains, very real risks

- Expected advantages : increased funding of domestic investment, easier contra-cyclical economic policies, competition and technology transfers thanks to FDI...
- No clear-cut results from studies on the link between economic growth and financial openness, but greater instability (Gourinchas and Jeanne, 2006).
- South-East Asia (1997), Mexico (1994), Argentina (2001)... hit by abrupt capital flows reversals, leading to severe currency and/or banking crises with serious consequences on output and welfare

International Capital Flows: Uncertain Gains, Sure Pain

Dynamics of financial flows

- Significant increase over the last two decades.
- Even more at the beginning of the 21st century: capital flows incoming in emerging countries multiplied by 5 between 2003 and 2007.
- Drivers of capital flows:
 - rise of global value chains + fall of transport costs
 - improved macroeconomic fundamentals
 - international financial cycle, (probably) the most important one

Outline

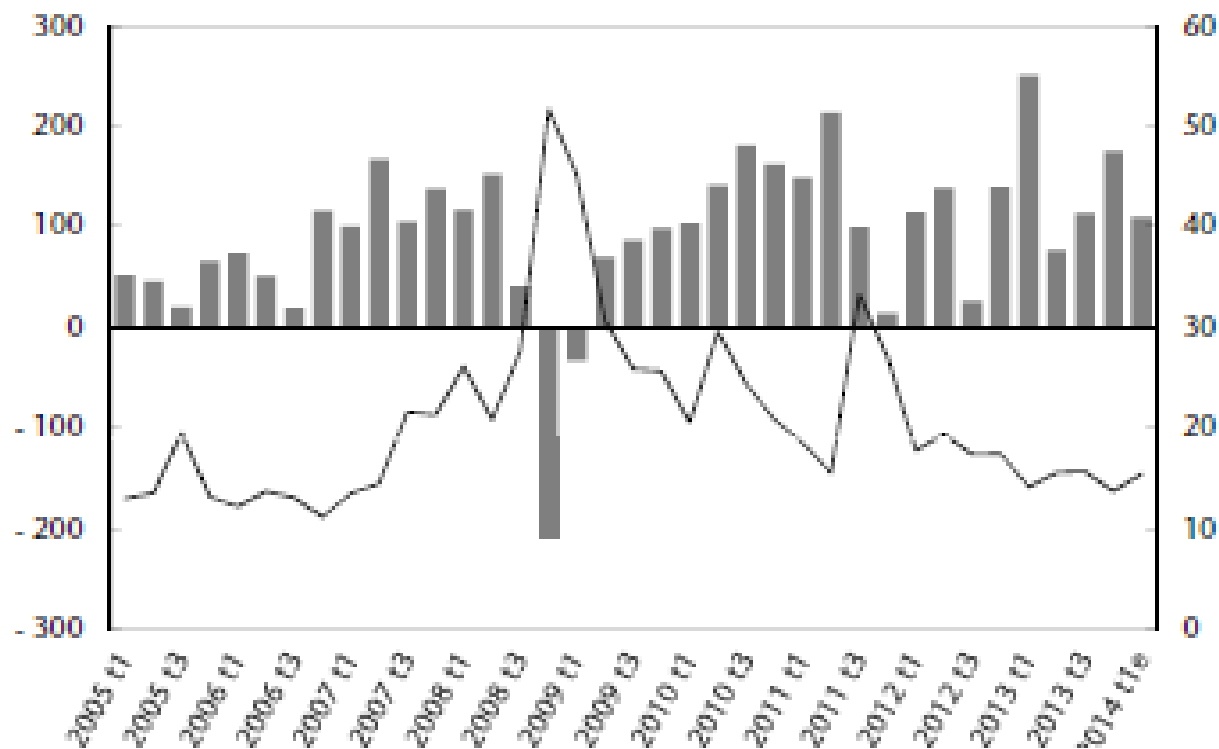
- **Underlying rationale:**
 - What can we learn from more advanced emerging countries experience, both regarding the origin of shocks and the policy responses?
 - How these lessons are to be adapted to fit the specific case of Low-Income Countries (LICs)?
- **Roadmap:**
 - Section 2 : Heterogeneous prevalence of Push factors
 - Section 3 : Policy Measures to Regulate Capital Flows
 - Section 4 : Lessons for the Management of Financial Flows in LICs

2. Heterogeneous Prevalence of Push Factors

Push factors: key drivers of capital flows ... (1)

- Weak real interest rates and growth in developed countries → *push factors* incenting capital to move away from advanced economies.
 - Calvo et al. (1993, 1996), Chohan et al. (1998), Forbes and Warnock (2012), Fratzscher (2012)
- Recent research: “Global Financial Cycle” as the common factor driving the return of many financial assets worldwide, as well as international fin. flows
 - Reflects the dynamics of uncertainty and risk aversion all over the world;
 - highly dependent on US monetary policy.

Figure 1. Risk aversion in developed countries and net foreign capital inflows in emerging countries



Note: bars = (non-FDI) capital inflows in 10 emerging countries (left scale, billions of USD); line =VIX (right scale). 10 emerging countries = BRICS + Indonesia, Mexico, Chile, Poland and Turkey.

VIX =Chicago Board Options Exchange Market Volatility Index, =average of volatilities on buy and sell options on Standard & Poor's 500 index.

Source: Caupin (2015)

2. Heterogeneous Prevalence of Push Factors

Push factors: key drivers of capital flows ... (2)

- Role of US monetary policy, supply of global liquidity (especially in US dollars) and global risk aversion in helping explain the high synchronicity of capital flows to emerging markets
 - Milesi-Ferretti and Tille 2011, Shin 2012, Cerutti et al. 2014, Rey 2015.
- Tightening of US monetary policy: deteriorates this global financial cycle
 - a rise in risk premia and a fall in asset prices.
 - contraction in cross-border bank lending (major part of big global banks).

2. Heterogeneous Prevalence of Push Factors

Push factors: key drivers of capital flows ... (3)

- A big issue for the emerging countries after 2007-2008, with the start of a long-lasting expansionary monetary policy in the USA.
- Powerful incentive for international capital flows to move towards emerging economies.
- May 2013: “taper tantrum”, the Fed President states that monetary policy should start to normalize
 - long-term US rates quickly rose → important capital outflows from emerging countries occurred.
 - strong depreciations of some currencies, increase in interest rates and bond returns in local currencies.

2. Heterogeneous Prevalence of Push Factors

Push factors: key drivers of capital flows ... (3)

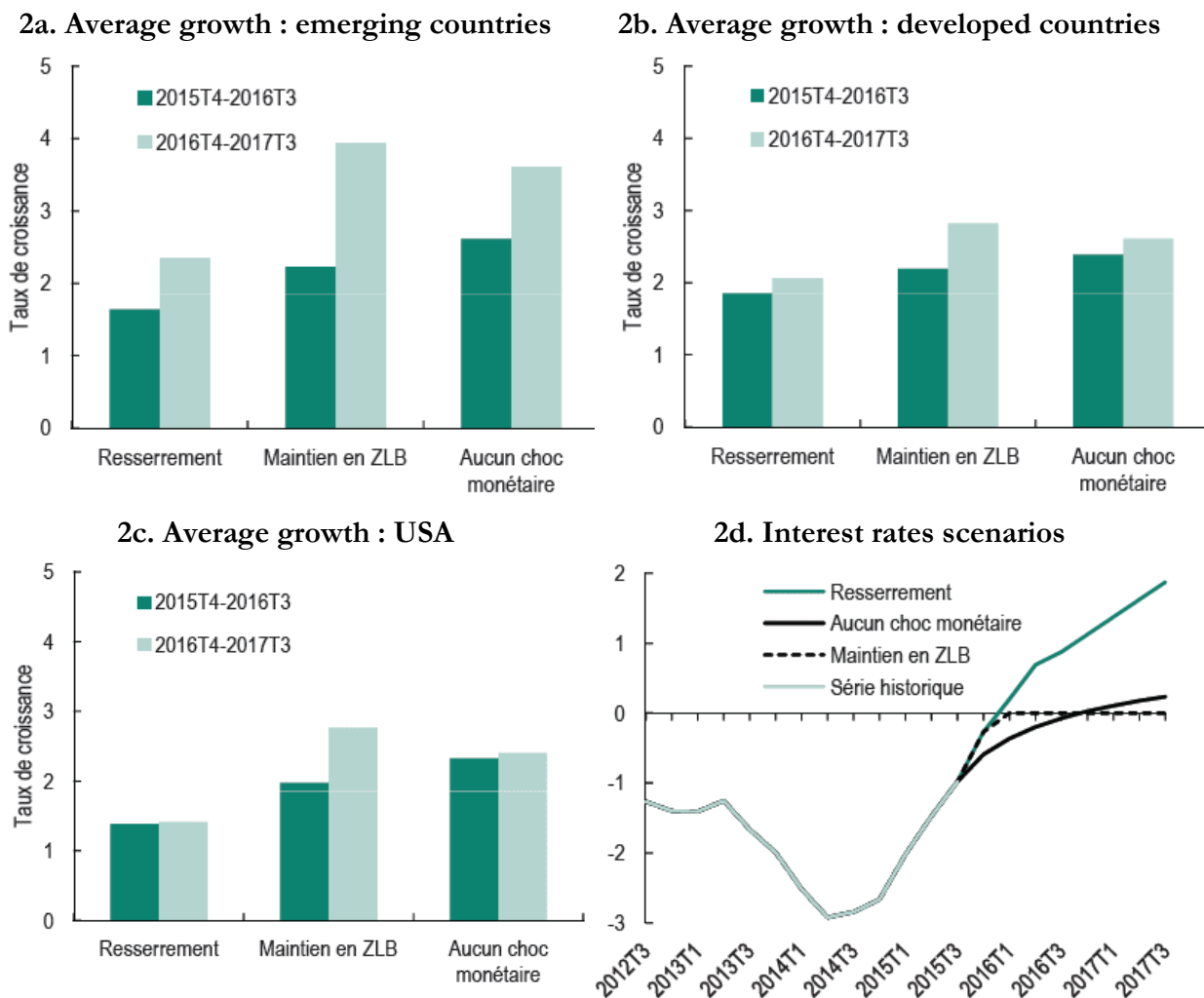
- Cheysson, Lhuissier and Tripier (2016): impact on growth of this exposure to US monetary policy for 33 advanced and emerging countries, on 1990-2015.
- Concl 1: emerging countries are significantly exposed to US monetary policy shocks.
- Concl 2: forecasts following different scenarios for US monetary policy:
 - 1st scenario “no monetary shock”: no change;
 - 2nd scenario “tightening”: gradual return to a 2% Fed Funds rate by the end of 2017;
 - 3rd scenario “continuing ZLB”.

2. Heterogeneous Prevalence of Push Factors

Push factors: key drivers of capital flows ... (4)

- Between 2016Q4 and 2017Q7, the implementation of the 2nd scenario brings **a loss of 1.6 point of growth** compared to the ZLB scenario, versus a loss of 0.8 point for advanced economies and 1.4 for the USA.
- **In relative terms**, this implies a **growth loss of 40% for emerging countries**, 26% for advanced economies and 48% for the USA.

Figure 2. US monetary policy and growth prospects



- *Note: Figures 2a to 2c report average annual growth in percentage for the considered period, for each of the scenarios represented on Figure 2d.*
- *Source: Cheysson, Lhuissier and Tripier (2016)*

2. Heterogeneous Prevalence of Push Factors

... but with heterogeneity in exposure (1)

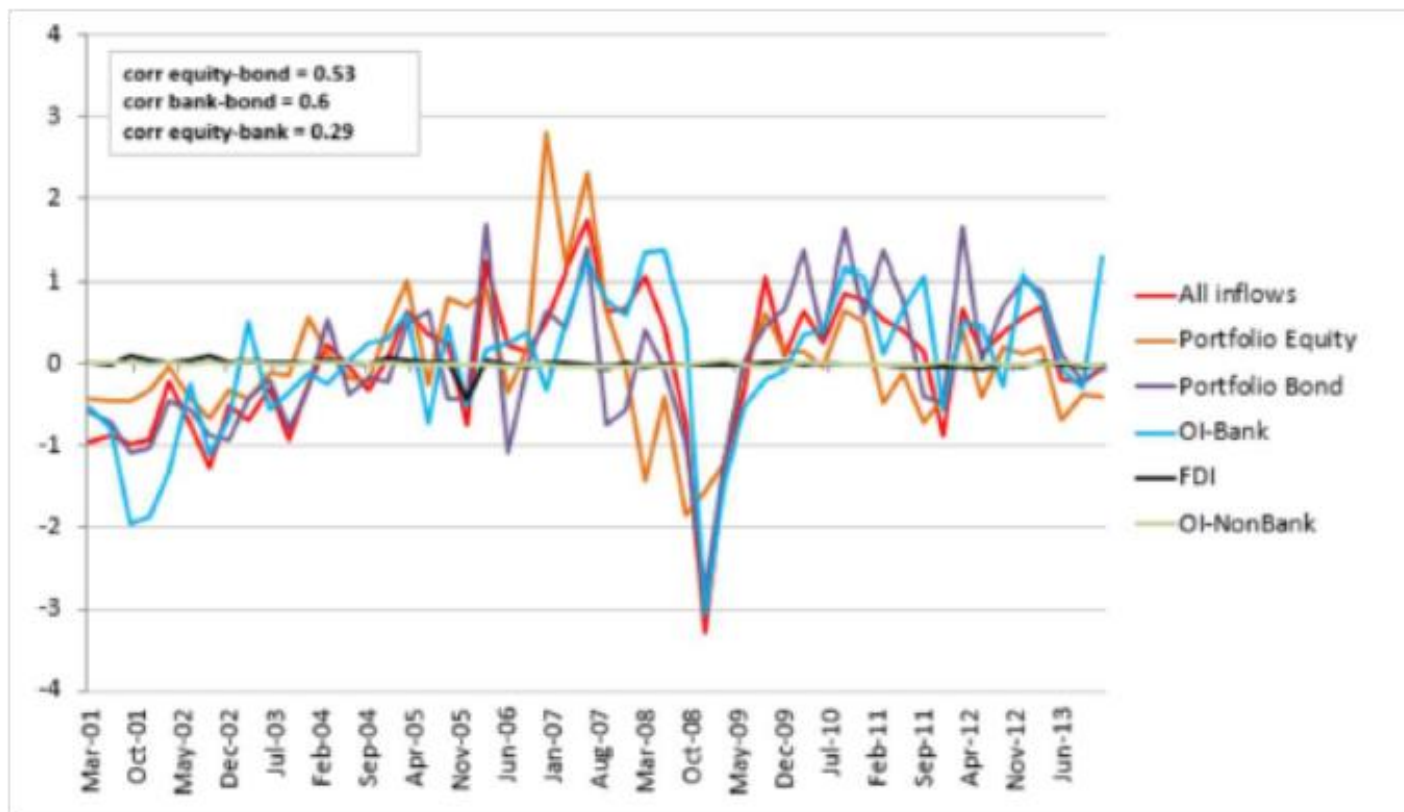
- Cerutti, Claessens and Puy (2015) : heterogeneity in the sensitivity to common dynamics across borrower countries.
 - May 2013: a good illustration (Sahay et al. 2014)
- Literature inconclusive on how weak borrowers' fundamentals worsen the effects of changes in push factors on recipient markets :
 - Aizenman et al. (2014): **sharper** deterioration of financial conditions in robust emerging markets than in fragile ones.
 - Eichengreen and Gupta (2014): no insulation with better macroeconomic fundamentals + more pressures on larger, more liquid markets.

2. Heterogeneous Prevalence of Push Factors

... but with heterogeneity in exposure (2)

- Cerutti, Claessens and Puy (2015) : investigation of the sensitivity of capital inflows to 34 emerging markets to global factors over the past 15 years.
- Concl 1: flows move mainly due to push factors...
- Concl 2: ... but major differences across flow types and emerging markets, depending on the level of local liquidity and the composition of foreign investor base.
 - countries relying more on international mutual funds and global banks for their external financing more affected by push factors.
 - Sounder institutional fundamentals and stronger macroeconomic performance do not insulate emerging markets against waves of capital flows.

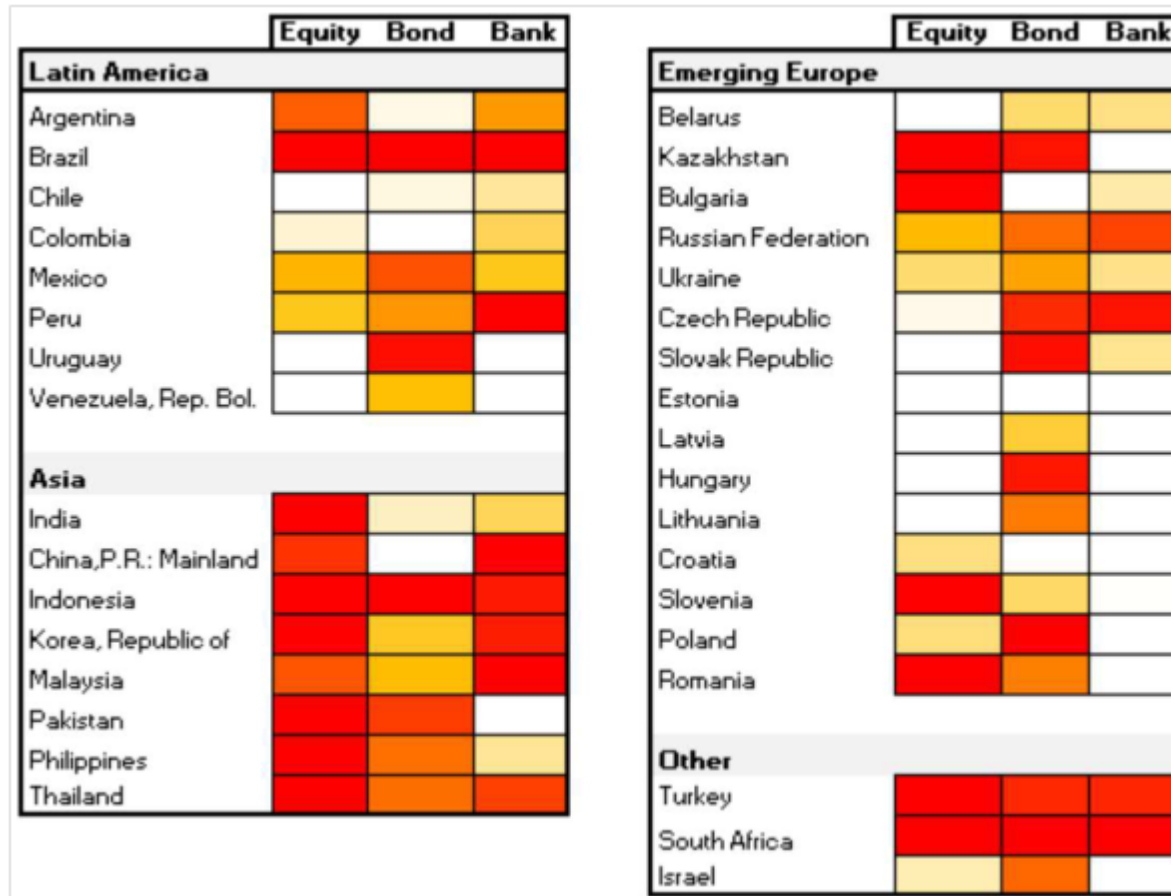
Figure 3. Common factor among all and various types of capital flows to emerging markets



Note: This plots the estimated common emerging market dynamics estimated using the latent factor model. OI= Other investment

Source: Cerutti, Claessens and Puy (2015)

Figure 4. Sensitivities of emerging markets to common factor in capital flows, by type



Note: sensitivities to the common factors for each type of flow, with red, orange, yellow and white indicating high, medium, low and no sensitivity to the common factors respectively.

Source: Cerutti, Claessens and Puy (2015)

3. Policy Measures to Regulate Capital Flows

What the recent analyses tell...(1)

- Hélène Rey (2013, 2015): key objective → insulate (at least partly) from the Global Financial Cycle:
 - usual trilemma of economic policy morphed into a dilemma.
 - monetary policy cannot be independent of the dynamics of financial conditions in the US, whatever the EXR system.
- Combination of macroprudential policies guided by aggressive stress-testing and tougher leverage ratios.
 - countercyclical capital cushions, loan-to-value ratios and debt-to-income ratios;
 - Maybe not that easy for LICs (see section 4)...
- Capital controls also appear as a sensitive measure.

3. Policy Measures to Regulate Capital Flows

What the recent analyses tell...(2)

- Molteni and Umana Dajud (2016): 44 countries between 1992 and 2015
- a sufficient level of foreign exchange reserves can provide a useful protection against sudden stops, especially for countries where debt denominated in foreign currency (especially USD) is high.
- Macroprudential measures and capital controls are also in order to reduce foreign currency denominated debt of both households and firms.

3. Policy Measures to Regulate Capital Flows

... *what the experience of emerging eco teaches (1)*

- Practical policy options implemented in emerging countries (see e. g. Cerutti, Claessens and Puy, 2015, and Molteni and Umana Dajud, 2016).
- Macroprudential measures:
 - limiting the level of foreign currency debt of a country relatively to the size of its banks, through a tax : South Korea, 2001)
 - setting currency-specific reserve ratios in order to dissuade transactions in foreign currencies: Turkey or Peru after 2008
 - collect information about the foreign investor base, and target those (like e.g., mutual funds) who invest on a short-term basis.

3. Policy Measures to Regulate Capital Flows

... what the experience of emerging eco teaches (2)

- Capital controls do reduce significantly the probability of having sudden stops.
- However, the **limitation of inflows** appears more efficient than the one of outflows.
- Discriminating capital controls by type of assets appears as an efficient instrument for reducing the probability of sudden stops, especially for derivatives and asset-backed securities.

4. Lessons for Low-Income Countries

Specific issues with low-income countries (1)

- Some key features also in order for less developed economies, especially regarding the key driving role of global financial factors....
- ... but LIC have specificities, e.g. a higher sensitivity to commodity prices:
 - Price of commodities positively correlate with the global financial cycle... (see McKinnon, 2013, 2014)
 - ... meaning terms of trade should increase for net exporters of commodities (a significant share of LICs) during the upward phase of the cycle, and deteriorate when cycle is downward
- This creates an additional source of vulnerability to Global Financial Cycle for LICs.

4. Lessons for Low-Income Countries

Specific issues with low-income countries (2)

- Lane (2015): macroeconomic specificities of LICs reflect into the composition of their financial flows on the risks embedded in their current account balance:
 1. Domestic stock markets underdeveloped → FDI primary type of international equity funding.
 2. External debt: official debt plays a key role + official reserves form the main proportion of foreign assets.
 3. Third, low-income countries also receive substantial official aid inflows.

Table 1. External balance sheet of LICs

	2002	2007	2009	2011
Foreign assets	31.7	36.1	36.0	35.0
Debt assets	14.3	17.9	15.0	15.0
FDI assets	0.2	0.5	0.3	0.2
Foreign reserves	12.9	18.0	18.6	16.0
Foreign liabilities	98.7	75.0	84.3	91.9
Debt liabilities	73.5	35.8	50.3	42.3
FDI liabilities	24.4	32.4	36.8	39.5
IFI ratio	137.9	109.8	124.9	127.8

Data are from the updated version of Lane and Milesi-Ferretti (2007). Median country values are shown in each category. The variables are scaled by GDP. FDI, foreign direct investment. IFI, international financial integration.

Note: IFI (International Financial Integration) ratio is the sum of foreign assets and foreign liabilities relative to GDP

Source: Lane (2015)

4. Lessons for Low-Income Countries

Specific issues with low-income countries (3)

- What about the impact of terms-of-trade on capital flows (reverse relationship)?
- Lane assumes exogeneity of terms of trade relatively to contemporaneous capital flows...
- Striking to see that the correlation between terms of trade and financial flows varies across time:
 - negative during the ‘normal’ periods of 2003–2007 and 2010–2012...
 - ... but positive during the 2008–2009 crisis period.
- Improvement of terms of trade associated with less financial flows at the top of global financial cycle but increased inflows in a crisis period.

4. Lessons for Low-Income Countries

Policy Options in the specific context of LICs (1)

- Experience of more advanced emerging countries: openness to financial flows to be tightly monitored, otherwise destabilizing consequences and substantial costs in terms of output and welfare.
- Issues likely to be magnified for LIC: small size of the domestic financial system makes it problematic to manage a fully open financial account.
- Other distortions likely to be exacerbated: availability of external funding may tempt short-horizon governments to overborrow or facilitate excessive credit growth by domestic banks (see Lane, 2015).

4. Lessons for Low-Income Countries

Policy Options in the specific context of LICs (2)

- Ideally, **macro-prudential policies**, in order to curb excessive leverage (target foreign currency debt)...
- ... However, importance of non-bank capital flows + limited capacity to implement effective macroprudential policies → **capital controls** (targeting inflows), **permanent** rather than time-varying measures.
- Underdeveloped domestic banking sector /no global banks: partial restoration of trilemma for LICs → **autonomous monetary policy with flexible EXR**, useful in reacting to external financial shocks

4. Lessons for Low-Income Countries

Policy Options in the specific context of LICs (3)

- **Exposure to “fickle” investors should be limited**, through appropriate taxes and regulations, whereas long-term investments (like FDI) should be favored.
- Fiscal policy: **maintaining fiscal discipline** during booms through institutional reforms such as fiscal rules and an independent fiscal council.
- At the international level: **insurance mechanism** by international financial institutions and bilateral donors → “lenders of last resort” **in the event of a sudden stop**. To avoid moral hazard, subject to the adoption of a credible domestic adjustment program.